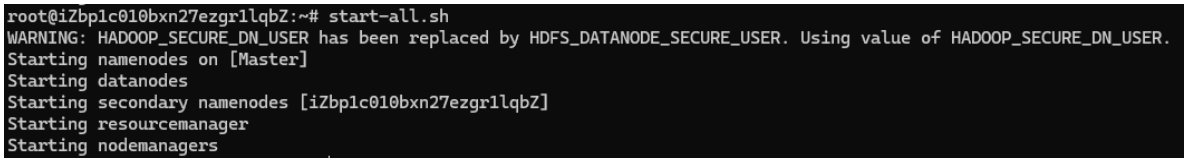
Change config of ChameleonEC

```
cd ~/ElasticRepair/conf
vim config.xml
cd ~/ElasticRepair/scripts
python3 edit_config.py
```

YCSB-Evauation:

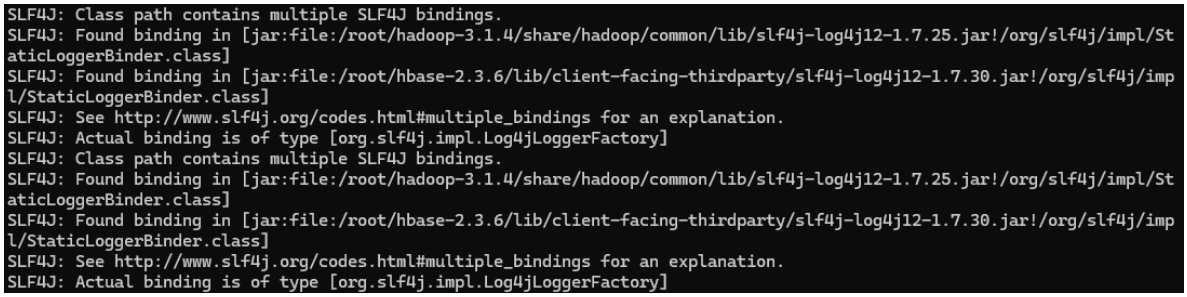
Start HBase:

```
start-all.sh
```



If you see this, it indicates successful operation.

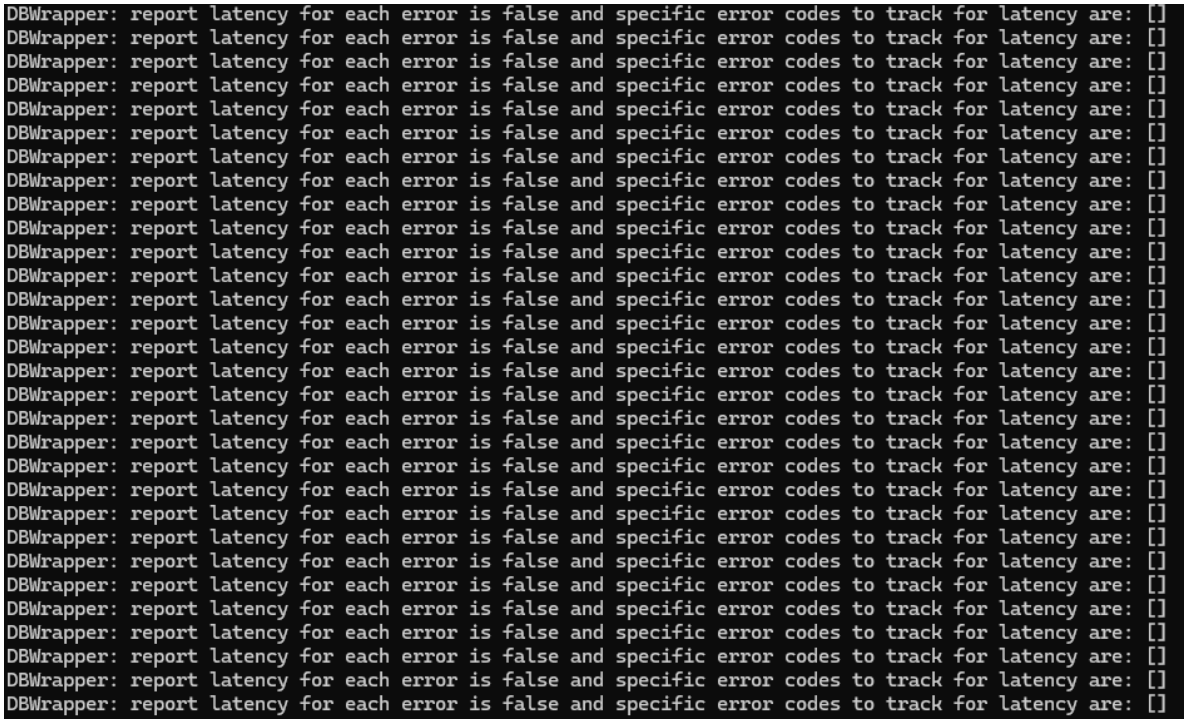
```
start-hbase.sh
```



If you see this, it indicates successful operation.

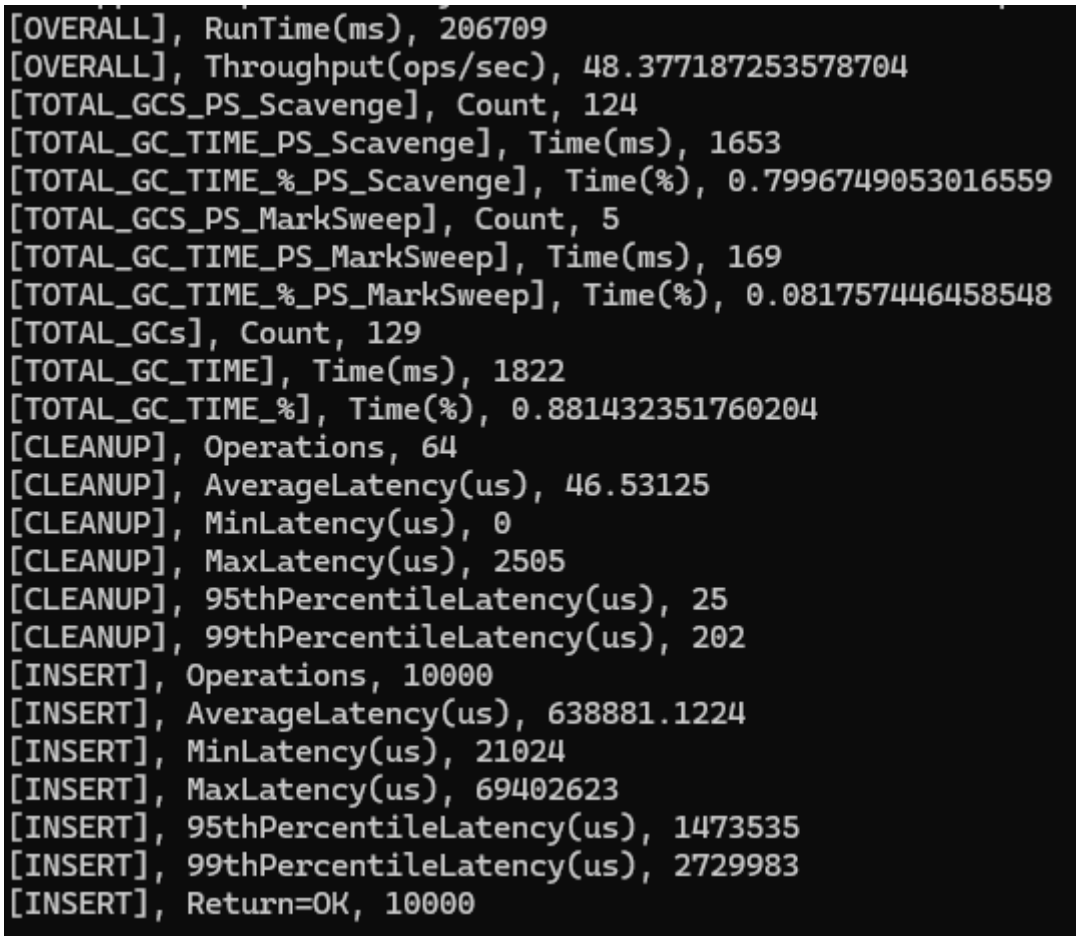
YCSB load:

```
cd HPCA-AE
python3 YCSB-Load.py 0
```



If you see this, it indicates successful operation.

(It often takes about 5 mins.)



YCSB Load successfully.

YCSB and ChameleonEC Run:

```
cd ~/ElasticRepair/scripts/bandwidth
python3 run-BD-Monitor.py
```

```
root@iZbp1c010bxn27ezgr1lqbZ:~/ElasticRepair/scripts/bandwidth# python3 run-BD-Monitor.py
BandWidthMonitor.py                                                                 100% 5063     4.9KB/s   00:00
ssh 172.16.0.2 " python3 /root/ElasticRepair/scripts/bandwidth/BandWidthMonitor.py /root/ElasticRepair/logs/bd-output.cs
v 20 &> /root/ElasticRepair/logs/run-BD-Monitor-log &"
BandWidthMonitor.py                                                                 100% 5063     4.9KB/s   00:00
ssh 172.16.0.3 " python3 /root/ElasticRepair/scripts/bandwidth/BandWidthMonitor.py /root/ElasticRepair/logs/bd-output.cs
v 20 &> /root/ElasticRepair/logs/run-BD-Monitor-log &"
BandWidthMonitor.py                                                                 100% 5063     4.9KB/s   00:00
ssh 172.16.0.4 " python3 /root/ElasticRepair/scripts/bandwidth/BandWidthMonitor.py /root/ElasticRepair/logs/bd-output.cs
v 20 &> /root/ElasticRepair/logs/run-BD-Monitor-log &"
BandWidthMonitor.py                                                                 100% 5063     4.9KB/s   00:00
ssh 172.16.0.5 " python3 /root/ElasticRepair/scripts/bandwidth/BandWidthMonitor.py /root/ElasticRepair/logs/bd-output.cs
v 20 &> /root/ElasticRepair/logs/run-BD-Monitor-log &"
BandWidthMonitor.py                                                                 100% 5063     4.9KB/s   00:00
ssh 172.16.0.6 " python3 /root/ElasticRepair/scripts/bandwidth/BandWidthMonitor.py /root/ElasticRepair/logs/bd-output.cs
v 20 &> /root/ElasticRepair/logs/run-BD-Monitor-log &"
BandWidthMonitor.py                                                                 100% 5063     4.9KB/s   00:00
ssh 172.16.0.7 " python3 /root/ElasticRepair/scripts/bandwidth/BandWidthMonitor.py /root/ElasticRepair/logs/bd-output.cs
v 20 &> /root/ElasticRepair/logs/run-BD-Monitor-log &"
BandWidthMonitor.py                                                                 100% 5063     4.9KB/s   00:00
```

If you see this, it indicates successful operation.

```
cd ~/HPCA-AE
python3 YCSB-Run.py 2
```

```
DBWrapper: report latency for each error is false and specific error codes to track for latency are: []
DBWrapper: report latency for each error is false and specific error codes to track for latency are: []
DBWrapper: report latency for each error is false and specific error codes to track for latency are: []
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DBWrapper: report latency for each error is false and specific error codes to track for latency are: []
```
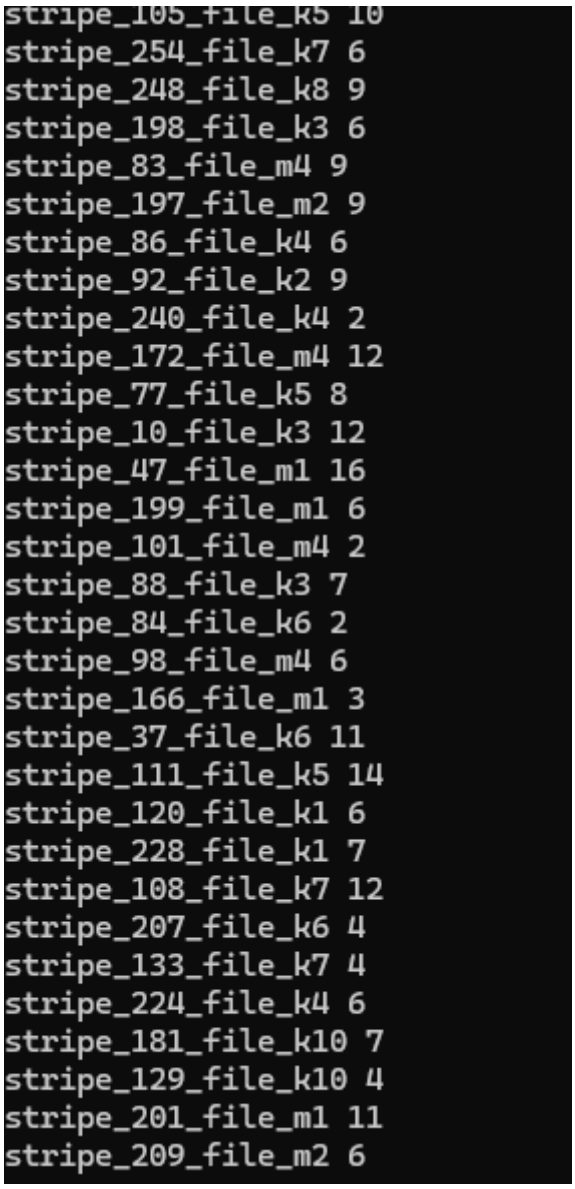
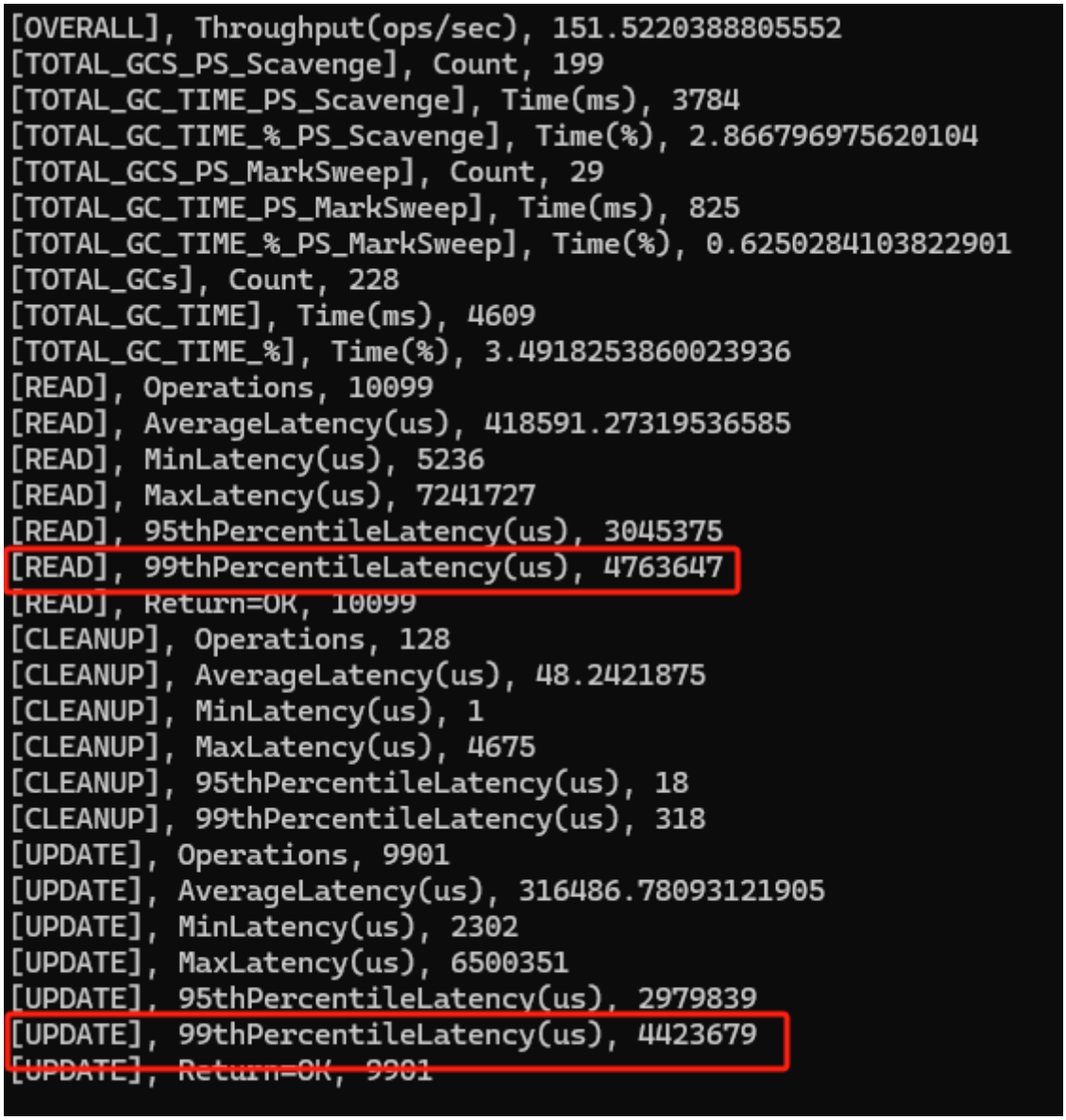

If you see this, it indicates YCSB trace run successfully.

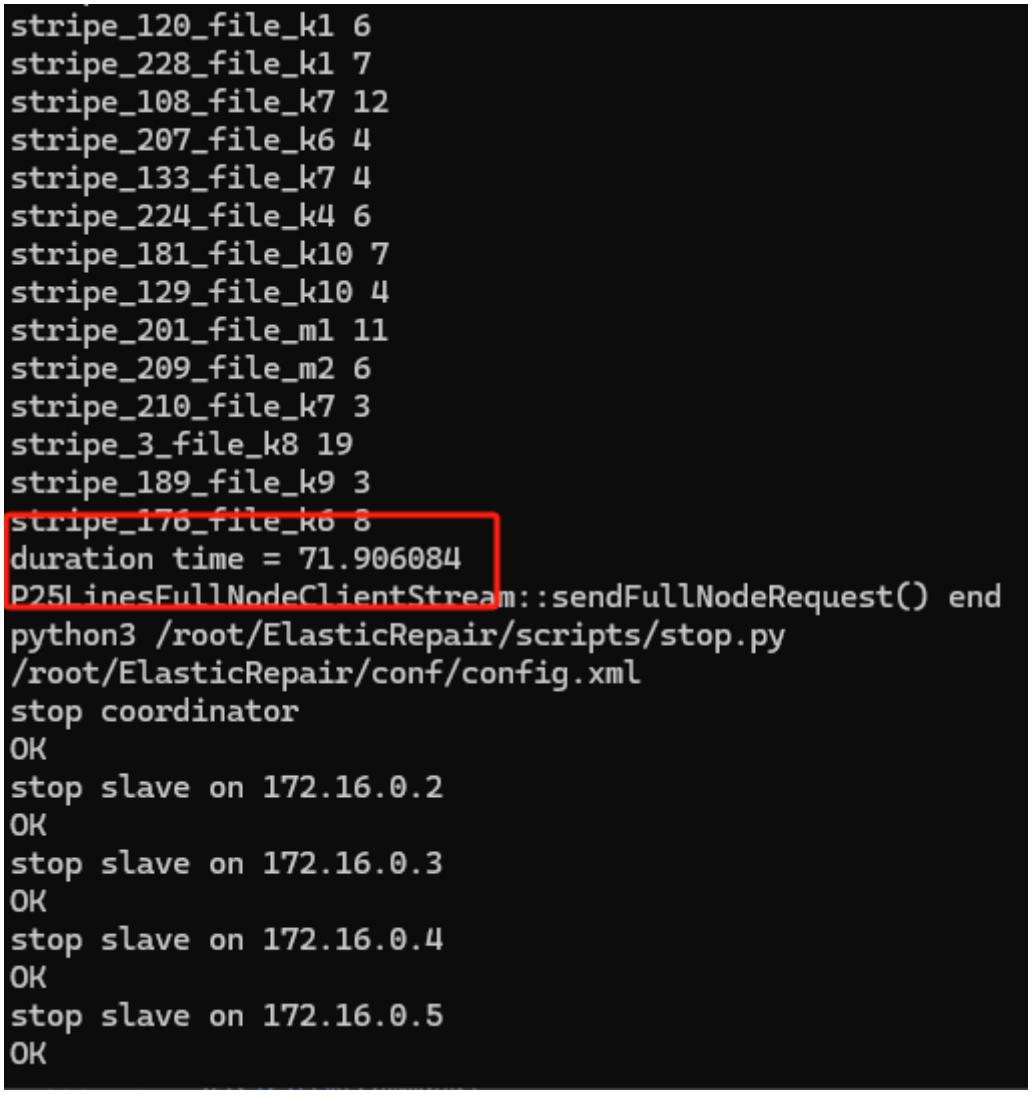


if you see this, erasure code repair run successfully.

You can get the P99 latency of YCSB in the output:



You can get the repair time of erasure code in the output:



the repair throughput of erasure code is:
64 * 200 / repair time = 64 * 200 / 71.906084 = 178 MB/s

Memcached-Evauation:

Start Memcached:

```
cd ~/trace/facebook
python3 facebook-run.py 3
python3 facebook-run.py 3 (need run 2 times)
```

```
root@iZbp1c010bxn27ezgr1lqbZ:~/trace/facebook# python3 facebook-run.py 3
ssh root@Master "service memcached stop"
ssh root@Master "memcached -d install -m 8192 -u root -p 11211 -c 4096 -I 1M"
ssh root@Slave2 "service memcached stop"
ssh root@Slave2 "memcached -d install -m 8192 -u root -p 11211 -c 4096 -I 1M"
ssh root@Slave3 "service memcached stop"
ssh root@Slave3 "memcached -d install -m 8192 -u root -p 11211 -c 4096 -I 1M"
ssh root@Slave4 "service memcached stop"
ssh root@Slave4 "memcached -d install -m 8192 -u root -p 11211 -c 4096 -I 1M"
ssh root@Slave5 "service memcached stop"
ssh root@Slave5 "memcached -d install -m 8192 -u root -p 11211 -c 4096 -I 1M"
ssh root@Slave6 "service memcached stop"
ssh root@Slave6 "memcached -d install -m 8192 -u root -p 11211 -c 4096 -I 1M"
ssh root@Slave7 "service memcached stop"
ssh root@Slave7 "memcached -d install -m 8192 -u root -p 11211 -c 4096 -I 1M"
ssh root@Slave8 "service memcached stop"
ssh root@Slave8 "memcached -d install -m 8192 -u root -p 11211 -c 4096 -I 1M"
ssh root@Slave9 "service memcached stop"
ssh root@Slave9 "memcached -d install -m 8192 -u root -p 11211 -c 4096 -I 1M"
ssh root@Slave10 "service memcached stop"
ssh root@Slave10 "memcached -d install -m 8192 -u root -p 11211 -c 4096 -I 1M"
ssh root@Slave11 "service memcached stop"
ssh root@Slave11 "memcached -d install -m 8192 -u root -p 11211 -c 4096 -I 1M"
ssh root@Slave12 "service memcached stop"
```

If you see this, it indicates successful operation.

Memcached Load:

```
./facebook-load
./IBM-load
./twitter-load
```

load of facebook is fast, and you will see IBM load like this:

```
root@iZbp1c010bxn27ezgr1lqbZ:~/trace/IBM# ./IBM-load
111111111111111111111111
222222222222222222222222
```

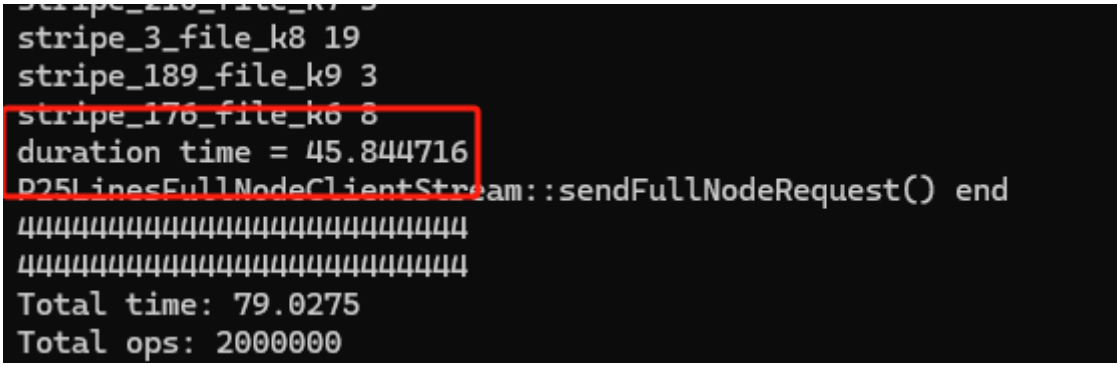
```
root@iZbp1c010bxn27ezgr1lqbZ:~/trace/IBM# ./IBM-load
111111111111111111111111
222222222222222222222222
IBM query init finished.
333333333333333333333333
```

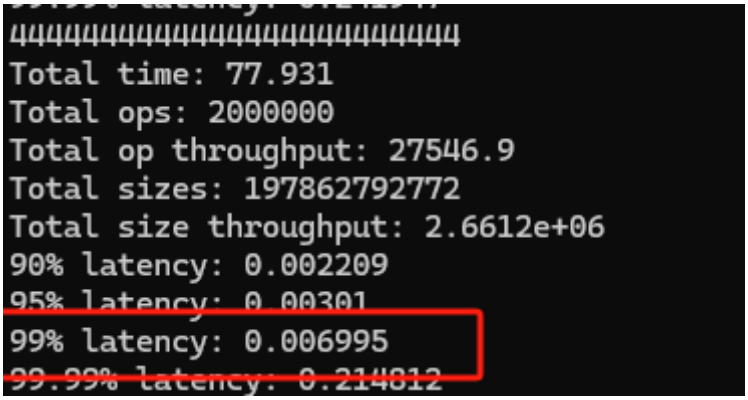
IBM load successfully.

Memcached Run:

```
python3 facebook-run.py 1
or python3 IBM-run.py 1
or twitter-run.py 1
```

![image-20241224155312133](C:\Users\63121\Desktop\YCSB-Evauation.assets\image-20241224155312133.pn


stripe_3_file_k8 19
stripe_189_file_k9 3
duration time = 45.844716
P25LinesFullNodeClientStream::sendFullNodeRequest() end
Total time: 79.0275
Total ops: 2000000


Total time: 77.931
Total ops: 2000000
Total op throughput: 27546.9
Total sizes: 197862792772
Total size throughput: 2.6612e+06
90% latency: 0.002209
95% latency: 0.00301
99% latency: 0.006995
99.99% latency: 0.214812